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| APPLICATION NO.                                       | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.                 | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------------------|------------------|
| 10/784,251  | 02/24/2004  | Pei Choa Wang        | OP-093000041                        | 1177             |
| 46103   | 7590        | 10/03/2005           |                                     |                  |
| HDSL<br>4331 STEVENS BATTLE LANE<br>FAIRFAX, VA 22033 |             |                      | EXAMINER<br>FLETCHER III, WILLIAM P |                  |
|   |             |                      | ART UNIT                            | PAPER NUMBER     |
|   |             |                      | 1762                                |                  |
| DATE MAILED: 10/03/2005                               |             |                      |                                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/784,251

Applicant(s)

WANG, PEI CHOA

Examiner

William P. Fletcher III

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_

- 5) ☐ Notice of Informal Patent Application (PTO-152) (4 pgs.)
- 6) ☒ Other: definition of 'level' (2 pgs.)

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment and response of 10 June 2005 is acknowledged. Claims 1-7 are pending.

### *Response to Arguments*

2. Applicant's arguments filed in the above-mentioned response have been fully considered but they are not persuasive.

3. Applicant argues:

The Examiner states that it would have been obvious to one of ordinary skill in the art to modify Leonard's method from rotating to vibrating as suggested by Wang. Applicant respectfully disagrees with such combination. First, if we replace the rotation requirement in Leonard method with vibration, then Leonard's method won't work, the slurry will not be uniformly distributed evenly on the inside wall of the pipe. Second, not only a rotation is required, but it must reach a certain high speed rotation rate to achieve the intended result. Overall, without rotation, Leonard's method won't work (page 4, second paragraph).

This argument is not persuasive because applicant has not accurately represented the examiner's position with respect to the combination of Leonard and Wang. The examiner's position, as set forth in the prior Office action, reads:

Leonard teaches that the pipe is rotated to ensure distribution of the slurry within the pipe (3:23-24). Wang teaches a method in which the internal surface of a metal article is coated with a metallic powder slurry (abstract, for example). The article is vibrated to ensure that the entire surface is wetted by the slurry (4:7-13). Consequently, it would have been obvious to one of ordinary skill in the art to modify the method of Leonard so as to, in addition to rotating the pipe, vibrating it. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of further ensuring that the entire interior surface of the pipe is wetted with slurry, as suggested by Wang (page 5, second paragraph, emphasis added).

Clearly, the examiner's position is not to *replace* the rotation of Leonard with the vibration of Wang; rather to vibrate *in addition to* rotating. Consequently, because applicant's argument is not commensurate with the rejection of record, it is not persuasive. Applicant is reminded that the test for obviousness is not whether the features of a secondary reference may be bodily

Art Unit: 1762

incorporated into the structure of the primary reference. Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art. MPEP § 2145(III). In the present case, Leonard teaches rotating to wet the entire interior surface of the pipe with slurry and Wang teaches vibrating to wet the entire interior surface of a hollow article with slurry. The combined teachings of these references, taken as a whole, suggest both rotating *and* vibrating to doubly ensure wetting of the interior surface with slurry.<sup>1</sup>

4. Applicant argues:

Both Leonard and Eastman require additional components and particular operations to control the desired thickness of the wick layer. On the contrary, the current application doesn't require any similar components or operations as Leonard or Eastman requires (page 5).

and

Meantime, Leonard and Eastman use total different ways to control the thickness of the wick layer from this application does. Although Eastman can form a 0.254-0.508 mm thickness layer, however, it requires using a non-bonding base fixture and a mandrel to form the desired thickness. An Leonard requires using sleeves and high speed rotation of the pipe to set the thickness of the wick layer. Therefore, Either Leonard in view of Wang or Leonard in view of Eastman does not suggest forming a thin layer as applicant does in this application (page 7, emphasis in original).

Again, these arguments are not persuasive because applicant has not accurately represented the examiner's position. The examiner's position, as set-forth in the prior Office action, reads:

...although Leonard explicitly teaches controlling the thickness of the metal powder layer, this reference is silent with respect to the thickness of the layer. Eastman teaches a method of coating the interior surface of a pipe with a metal powder slurry. A representative thickness thereof is 0.010-0.020 in (0.254-0.508 mm) (4:50-58). It is noted that the term "about" was held to be clear but flexible. *Ex parte Eastwood*, 163 USPQ 316 (Bd. App. 1968). It is the examiner's position that Eastman's teaching of 0.245 mm reads on applicant's claimed thickness of "about 0.1 mm." Consequently, it would have been obvious to one of ordinary skill in the art to modify the method of Leonard so as to apply the coating in a thickness of 0.245 mm which is about 0.1 mm. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of successfully yielding an operative and effective heat wick for a pipe.

In the alternative, both Leonard and Eastman teach controlling the thickness of the layer (Leonard, 6:1-6) and Eastman, 2:29-37). It is the examiner's position that the thickness of the heat wick layer is a result-effective variable. The layer must be thick enough to provide wicking for adequate volumes of liquid, while not being so thick as to make such wicking unduly slow. Consequently, absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed thickness, it would have been obvious to one of ordinary skill in the art to

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<sup>1</sup> *In re Rose*, 105 USPQ 237

modify the method of Leonard so as to optimize the wicking layer thickness by routine experimentation (see MPEP § 2144.05(II)) (pages 5-6).

As noted above, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art. MPEP § 2145(III). Leonard in view of Eastman suggests a known, operative slurry thickness that reads on applicant's claimed thickness. Further, it is the examiner's that such thicknesses are result-effective variables which are obvious to optimize. These are broadly-applicable teachings regarding the thicknesses of slurry coatings on the interior surfaces of pipes; and, when taken as a whole, suggest such thicknesses or optimization thereof to one of ordinary skill in the art.

5. As a final point, the examiner indicated claim 3 to be allowable in the prior Office action. Applicant has amended this claim to recite a substrate having a multi-level configuration, as opposed to a stair-like configuration. This amendment significantly broadens the scope of this claim and, as explained below, it is the examiner's position that the combination of record teaches this limitation as well. Consequently, the indicated allowability of claim 3 is withdrawn.

#### ***Claim Objections***

6. Claims 5 and 7 are objected to because of the following informalities:

- a. In claim 5, "multi-levels configuration" should, apparently, read "multi-level configuration."
- b. In claim 7, the preamble is syntactically awkward. The examiner suggests the following: "...suitable for use in a container having any profile and having a plurality of interior bottom surfaces arranged in a multi-level configuration."

Art Unit: 1762

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. **Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.** The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This claim previously recited “pure” water, but has been amended to recite “distilled” water. As noted in the prior Office action, the term “pure” is relative and, consequently, it is impossible to determine the metes and bounds of this term. As such, it is further impossible to determine whether or not distilled water is to be included within applicant’s definition of “pure” water. Since the originally-filed disclosure recites only “pure” water and it is impossible to determine whether this recitation supports distilled water, it is the examiner’s position that the originally-filed specification does not reasonably convey that applicant had possession of the claimed method utilizing distilled water.

***Claim Rejections - 35 USC § 103***

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 1762

10. **Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leonard et al. (US 4,885,129 A) in view of Wang (US 5,718,046 A) and Eastman (US 4,196,504 A).**

Claims 1, 2, and 4-5 are rejected for the reasons set-forth under this heading in the prior Office action.

With respect to claim 3, this claim has been amended to read that the container “comprises a plurality of interior bottom surfaces arranged in a multi-levels configuration.” It is the examiner’s position that this limitation is broader than the previously-recited “stair-like configuration.” The term “level” includes the following definition: “one of various positions with respect to height.”<sup>2</sup> Consider a pipe in cross-section. If one travels around the circumference of the pipe from point to point, each successive point has a height that is different from the preceding point. Consequently, a pipe has an interior surface having multiple points with various positions with respect to height and reads on claim 3 as-amended.

With respect to new claim 7, this claim is rejected for the same reasons as applied to claim 1 under this heading in the prior Office action as well as the reasons applied to claim 3 above.

### ***Conclusion***

11. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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<sup>2</sup> *The American College Dictionary*, © 1970 by Random House, Inc., pages 700-701, attached.

Art Unit: 1762

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

12. The prompt development of clear issues in the prosecution history requires that applicant's reply to this Office action be fully responsive (MPEP § 714.02). When filing an amendment, applicant should specifically point out the support for any amendment made to the disclosure, including new or amended claims (MPEP §§ 714.02 & 2163). A fully responsive reply to this Office action, if it includes new or amended claims, must therefore include an explicit citation (i.e., page number and line number) of that/those portion(s) of the original disclosure which applicant contends support(s) the new or amended limitation(s).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Monday through Friday, 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1762

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*WPF 9/27/05*

William Phillip Fletcher III  
Patent Examiner, USPTO  
Art Unit 1762



TIMOTHY MEES  
SUPERVISORY PATENT EXAMINER

## letter box

or the literal meaning. *b.* to the fullest extent. —*v.t.* 10. to mark or write with letters. [ME. *l.* OF: *m. lettre*, *g. littera*, alphabetic character; *pl.* epistle, literature] —*let/ter-er*, *n.* —*Syn.* 7. See literature.

**letter box**, *Chiefly Brit.* mailbox.

**letter carrier**, *U.S.* postman.

**lettered** (*lèt/ərd*), *adj.* 1. educated or learned. 2. pertaining to or characterized by polite learning or literary culture. 3. marked with or as with letters.

**letter-gram** (*lèt/əgrām*), *n.* night letter.

**letter-head** (*lèt/ərhéd*), *n.* 1. a printed heading on letter paper, esp. one giving the name and address of a business concern, an institution, etc. 2. a sheet of paper with such a heading.

**letter-ing** (*lèt/or'ing*), *n.* 1. act or process of inscribing with or making letters. 2. the letters themselves.

**letter of advice**, 1. a document, esp. in commercial shipments, giving specific information as to the consignee's agent in the consignee's territory, his bank, warehouse, etc. 2. *Com.* a drawer's document, usually forwarded ahead of the bill of lading and other papers giving title to goods shipped by the drawer, that a bill has been issued against the drawee.

**letter of credit**, 1. an order issued by a banker, allowing a person named to draw money to a specified amount from correspondents of the issuer. 2. an instrument issued by a banker, authorizing a person named to make drafts upon the issuer up to an amount specified.

**letter of marque**, license or commission granted by a state to a private citizen to capture and confiscate the merchant ships of another nation. Also, *letter of marque and reprisal*.

**letter-perfect** (*lèt/əpúr'fekt*), *adj.* 1. knowing one's part, lesson, or the like, perfectly. 2. accurate; exact.

**letter-press** (*lèt/əprés*), *n.* 1. matter printed from letters or type, rather than from engraved plates. 2. printed text or reading matter, as distinguished from illustrations, etc.

**letters of administration**, *Law.* an instrument issued by a court or public official authorizing an administrator to take control of and dispose of the estate of a decedent.

**letters of credence**, papers formally authorizing a nation's diplomatic agents, issued by the appointing state.

**letters patent**, *Law.* a written or printed instrument issued by the sovereign power, conferring upon a patentee for a limited time the exclusive right to make, use, and sell his invention.

**letters testamentary**, *Law.* an instrument issued by a court or public official authorizing an executor to take control of and dispose of the estate of a decedent.

**Lettic** (*lèt/Yk*), *adj.* 1. pertaining or related to the Letts. —*n.* 2. Lettish. 3. *Obs.* the Baltic group of languages.

**Let-tish** (*lèt/Ysh*), *adj.* 1. pertaining to the Letts or their language. —*n.* 2. the language of Latvia.

**let-tre de ca-chet** (*lèt/r da káshé*), *French Hist.* a letter under the seal of the sovereign, esp. one ordering imprisonment, frequently without trial.

**let-tre de change** (*lèt/r da shánzh*), *French.* a letter or bill of exchange.

**lett-tuce** (*lèt/Ys*), *n.* 1. an important salad plant, *Lactuca sativa*, in many varieties, having large, succulent leaves which are much used for salad. 2. any species of *Lactuca*. [ME. *letuse*, *t. OF.* *m. laitues*, *pl. g. l. lactuca*]

**let-up** (*lèt/úp*), *n.* *Colloq.* cessation; pause.

**le-u** (*lè/dó*), *n., pl. lei* (*lā*). the Rumanian monetary unit equal to 100 bani and worth about one U.S. cent.

**Leu-cas** (*lè/kas*), *n.* Levkas. Also, *Leu'kas*.

**leu-cé-mi-a** (*lè/sé/míə*), *n.* leukemia.

**leu-cine** (*lè/sén*), *n.* *Biochem.* a white crystalline amino acid,  $C_6H_{13}NO_2$ , a constituent of proteins and also synthesized. Also, *leu-cin* (*lè/sín*). [f. *LEUC*(o) + *-INE*]

**leu-cite** (*lè/sít*), *n.* a whitish or grayish mineral, potassium aluminum silicate,  $KAlSi_3O_8$ , found in certain volcanic rocks. [t. *G.* *m. leucit*, *f. leuc-* *leuc*(o) + *-it* *-ITE*] —*leu-cit-ic* (*lè/sít/Yk*), *adj.*

**leuco-**, a word element meaning "white." Also, before vowels, *leuc-*. [t. *Gk.* *m. leuko-*, comb. form of *leukós*]

**leu-co base** (*lè/kó*), *Chem.* a noncolored or slightly colored compound made by reducing a dye and which is readily oxidized to regenerate the dye.

**leu-co-cratic** (*lè/kókrát/Yk*), *adj.* *Geol.* composed predominantly of light-colored minerals. [f. *LEUCO-* + *-CRAT* + *-IC*]

**leu-co-cyte** (*lè/kó'sít*), *n.* *Physiol.* one of the white or colorless corpuscles of the blood, concerned in the destruction of disease-producing microorganisms, etc.

**leu-co-cy-thé-mi-a** (*lè/kó'sít'hé/míə*), *n.* *Pathol.* leukemia. Also, *leu/co-cy-thae/mi-a*. [NL. See *LEUCO-*, *-CYTE*, *-HEMIA*]

**leu-co-cyt-ic** (*lè/kó'sít/Yk*), *adj.* 1. pertaining to leucocytes. 2. characterized by an excess of leucocytes.

**leu-co-cy-to-sis** (*lè/kó'sító'sís*), *n.* *Physiol., Pathol.* the presence of an increased number of leucocytes in the blood, esp. when temporary, as in infection, and not due to leukemia. [NL. See *LEUCOCYTE*, *-OSIS*] —*leu-co-cy-tot-ic* (*lè/kó'sítót/Yk*), *adj.*

**leu-co-ma-ine** (*lè/kó'má'én*), *n.* *Biochem.* any of a class of poisonous nitrogenous substances normally produced in a living animal body through metabolism. [f. *LEUCO-* + (*PRO*)*MAINE*]

**leu-co-pe-ni-a** (*lè/kó'pé'níə*), *n.* *Physiol.* a decrease in the number of white cells in the blood.

**leu-co-plast** (*lè/kóplást*), *n.* *Bot.* one of the colorless bodies found within the protoplasm of vegetable cells, and serving as points around which starch forms.

**leu-co-poi-e-sis** (*lè/kó'póí'sís*), *n.* *Physiol.* the formation and development of the white blood cells.

**leu-cor-rhe-a** (*lè/kó'rè'ə*), *n.* *Pathol.* a whitish discharge from the female genital organs. Also, *leu'cor-rhoe'a*. [NL. See *LEUCO-*, *-RRHEA*]

**leu-co-stic-te** (*lè/kó'stík/té*), *n.* any of several montane finches of the genus *Leucosticte*, commonly called rosy finches, as the Aleutian rosy finch (*L. tephrocotis griseonucha*).

**Leuc-tra** (*lè/k'trə*), *n.* a town in ancient Greece, in Boeotia: Thebans defeated Spartans here, 371 B.C.

**leu-ke-mi-a** (*lè/ké'míə*), *n.* *Pathol.* a somewhat rare, almost uniformly fatal disease, characterized by excessive production of white blood cells, which are usually found in greatly increased numbers in the blood. There is an accompanying anemia, often severe, and the spleen and lymphatic glands are usually enlarged and in a state of great activity. Also, *leu-kæ/mi-a*, *leucemia*. [t. NL. f. *s. Gk. leukós* white + *-emia* *-EMIA*]

**leu-ko-cyte** (*lè/kó'sít*), *n.* leucocyte.

**lev** (*lèf*), *n., pl. leva* (*lè/və*). the monetary unit and a gold coin of Bulgaria equal to 100 stotinki and stabilized in 1928 to equal approx. one cent in the U.S.

**Lev.,** Leviticus.

**Le Val-lois-Per-ret** (*də'vál wá' pè'rét*), a suburb of Paris in N. France, on the Seine. 62,871 (1954).

**Le-vant** (*lì'vánt*), *n.* 1. lands bordering the E shore of the Mediterranean and the Aegean, esp. Syria, Lebanon, and Israel. 2. (*i.e.*) a superior grade of morocco having a large and prominent grain, orig. made in the Levant; Levant morocco. [t. *F.* prop. *ppr.* of (*se*) *lever* rise (with reference to the rising sun). See *LEVER*]

**Levant dollar**, a silver coin used for trade purposes, originally minted in Austria, and circulating in Ethiopia, Eritrea, Aden, etc.; Maria Theresa thaler. Its value changes with the price of silver and economic conditions of countries where it is used.

**Le-van-tine** (*lì'vántín*, *lè/vánt'n*), *adj.* 1. of or pertaining to the Levant. —*n.* 2. a native or a vessel of the Levant. [f. *LEVANT* + *-INE*. Cf. *F. levantin*]

**Levant morocco**, *levant* (def. 2).

**le-va-tor** (*lì'və'tor*, *-tór*), *n., pl. levatores* (*lè/və'tór/-éz*). 1. that which raises or elevates. 2. *Anat.* a muscle that raises some part of the body. 3. *Surg.* an instrument used to raise a depressed part of the skull. [t. *L.* a lifter]

**lev-ee** (*lè/vé*), *n.* 1. Southern U.S. an embankment for preventing the overflowing of a river. 2. *Agric.* one of the small continuous ridges surrounding fields that are to be irrigated. 3. *Hist.* a landing place for vessels; a quay. [t. *F.* *m. levée*, der. *lever* raise. See *LEVER*]

**lev-ee** (*lè/vé*, *lè/vé*), *n.* 1. (in Great Britain) a public court assembly, held in the early afternoon, at which men only are received. 2. a reception: a presidential *levee* at the White House. 3. *Hist.* a reception of visitors held on rising from bed, as formerly by a royal or other personage. [t. *F.* *m. levé*, *lever* a rising. See *LEVER*]

**level** (*lè/vəl*), *adj., n., v., -eled, -eling* or (*esp. Brit.*) *-elled, -elling, adv.* —*adj.* 1. having no part higher than another; having an even surface. 2. being in a plane parallel to the plane of the horizon; horizontal. 3. on an equality, as one thing with another, or two or more things with one another. 4. equable or uniform. 5. mentally well-balanced: a *level* head. 6. one's level best, *Colloq.* one's very best; one's utmost. —*n.* 7. a device used for determining, or adjusting something to, a horizontal surface. 8. such a device consisting of a glass tube containing alcohol or ether with a movable bubble which when in the center indicates horizontality. 9. a surveying instrument combining such a device with a mounted telescope. 10. a measuring of differences in elevation with such an instrument. 11. an imaginary line or surface everywhere perpendicular to the plumb line. 12. the horizontal line or plane in which anything is situated, with regard to its elevation. 13. level position or condition. 14. a level tract of land, or an extent of country approximately horizontal and unbroken by irregularities. 15. a level or flat surface. 16. one of various positions with respect to height; a height (*of*): the water rose to a level of thirty feet. 17. a position or plane, high or low: acting on the level of amateurs. —*v.t.* 18. to make (a surface) level or even: to level ground before building. 19. to raise or lower to a particular level, or position. 20. to bring (something) to the level of the ground; knock down, as a person: the city was leveled by one atomic bomb. 21. to bring (two or more things) to an equality of status, condition, etc. 22. to make even or uniform, as coloring. 23. to aim or point at a mark, as a weapon, etc. 24. to turn (looks, etc.) in a particular direction. 25. *Surrey.* to find the relative elevation of different points in (land) as with a level. —*v.i.* 26. to bring things or persons to a common level. 27. to aim a weapon, etc. 28. to direct the mind.

*b.*, blend of, blended; *c.*, cognate with; *d.*, dialect, dialectal; *der.*, derived from; *f.*, formed from; *g.*, going back to; *m.*, modification of; *r.*, replacing; *s.*, stem of; *t.*, taken from; *?*, perhaps. See the full key on inside cover.

ous substances normally dy through metabolism.

**n.** *Physiol.* a decrease the blood.  
**n.** *Bot.* one of the color-protoplasm of vegetable and which starch forms.  
**s(s).** *n.* *Physiol.* the the white blood cells.  
*Pathol.* a whitish disl organs. Also, *lev/cor-ma*  
**n.** any of several monostide, commonly called  
*rosy finch (L. tephrocotis*

**n** in ancient Greece, in  
 rtans here, 371 B.C.  
*Pathol.* a somewhat rare,  
 characterized by exces-  
 cells, which are usually  
 bers in the blood. There  
 ten severe, and the spleen  
 ually enlarged and in a  
 leu-kae/mi-a, leucemia,  
 t-emia -EMIA]  
 leucocyte.  
 the monetary unit and a  
 00 stotinki and stabilized  
 in the U.S.

**ra/ pèrè/**, a suburb of  
 is 62,871 (1954).  
 is bordering the E shore  
 Aegean, esp. Syria, Leba-  
 prior grade of morocco  
 grain, orig. made in the  
 E, prop. pgr. of (se)  
 e rising sun). See **LEVER**  
 used for trade purposes,  
 id circulating in Ethiopia,  
 heressa thaler. Its value  
 and economic conditions

**ant n/ -tèn/**, *adj.* 1. of  
 n. 2. a native of a vessel  
 -rnt/. Cf. *levantin*.  
 def. 2).  
**pl. levatores** (lèv/à tòr-  
 vates. 2. *Anat.* a muscle  
 ody. 3. *Surg.* an instru-  
 part of the skull. [t. L: a

**U.S.** an embankment for  
 a river. 2. *Agric.* one of  
 irrounding fields, that are  
 nding place for vessels; a  
 raise. See **LEVER**

in Great Britain) a public  
 arly afternoon; at which  
 reception: a presidential  
 ist, a reception of visitors  
 merly by a royal or other  
 a rising. See **LEVER**

**led**, -eling or (*esp. Brit.*)  
 1. having no part higher  
 n surface. 2. being in a  
 f the horizon; horizontal.  
 g with another, or two or  
 4. equable or uniform.  
 a level head. 6. one's  
 ary best; one's utmost.  
 letermining, or adjusting  
 irface. 8. such a device  
 ntaining alcohol or ether  
 when in the center indi-  
 rveying instrument com-  
 nounted telescope. 10. a  
 elevation with such an  
 ry line or surface every-  
 umb line. 12. the horizon-  
 nything is situated, with  
 evel position or condition.  
 extent of country approxi-  
 mated by irregularities.  
 6. one of various positions  
 ht (of): the water rose to a  
 ion or plane, high or low:

**level** or even: to level ground  
 e or lower to a particu-  
 bring (something) to the  
 n, as a person: the city was  
 11. to bring (two or more  
 us, condition, etc. 22. to  
 ring. 23. to aim or point  
 24. to turn (looks, etc.)

*Surrey.* to find the relative  
 a (land) as with a level.  
 or persons to a common  
 ic. 28. to direct the mind.

**d from**; g., going back to;  
 full key on inside cover.

**use a level.** 30. *Aeron.* to fly parallel to the ground,  
 usually just before landing. (fol. by *off*)

**—adv.** 31. in a level, direct or even way or line.  
 [ME *livel*, t. OF, ult. g. L *libella*, dim. of *libra* a balance,  
 level] —*lev/èl-er*; *esp. Brit.* *lev/èl-er*, n. —*lev/-*  
*el-ly*, *adv.* —*lev/èl-ness*, n.

**—Syn.** 1. 2. **LEVEL**, **EVEN**; **FLAT**, **SMOOTH** suggest a uniform  
 surface without marked unevenness. That which is **level**, is  
 parallel to the horizon: a level surface; a billiard table must be  
 level. **FLAT** is applied to any plane surface free from marked  
 irregularities: a flat roof. With reference to land or country,  
**FLAT** connotes lowness or unattractiveness; **LEVEL** does not  
 suggest anything derogatory. That which is **EVEN** is free  
 from irregularities, though not necessarily level or plane:  
 an even land surface with no hills. **SMOOTH** suggests a high  
 degree of evenness in any surface, esp. to the touch and  
 sometimes to the sight: as smooth as silk.

**lev-el-head-ed** (lèv/àlhéd/), *adj.* having common  
 sense and sound judgment.

**leveling rod**, *Surrey.* a graduated rod used for  
 measuring heights in connection with a surveyor's level.

**Le-ven** (lèv/øn), n. Loch, a lake in E Scotland; ruins  
 of a castle in which Mary Queen of Scots was imprisoned.

**lever** (lèv/àr, lèv/àr), n. 1. a bar or rigid piece acted  
 upon at different points by two forces, as a voluntarily  
 applied force (the power) and a resisting force (the  
 weight), which generally tend to rotate it in opposite  
 directions about a fixed axis or support (the fulcrum).  
 2. any of various mechanical devices operating on  
 this principle, as a crowbar. —*t.t.* v.t. 3. to move  
 with or apply a lever. [ME *levere*, t. OF, m. *levoir*, lit.  
 raiser, der. *lever* raise, (refl.) rise, g. L *levare* lighten, lift,  
 raise] —*lev/er-like/*, *adj.*

**Lever** (lèv/àr), n. Charles James, 1806-72, Irish  
 novelist.

**lever-age** (lèv/àr/ij, lèv/àr/ij), n. 1. the action of a  
 lever. 2. the mechanical advantage or power gained  
 by using a lever. 3. increased power of action.

**lever-et** (lèv/àr/it), n. a young hare. [ME, t. OF, m.  
*levrette*, dim. of *levre*, g. L *lepus* hare]

**Lever-rier** (lèv/èr/yer), n. Urbain (vrbân/), 1811-77,  
 French astronomer.

**Le-vi** (lèv/vi), n. Bible, a son of Jacob and Leah; ances-  
 tor of the Levites. Gen. 29:34, etc. [t. Heb.: m. *Levi*]

**levi-a-ble** (lèv/àbəl), *adj.* 1. that may be levied.  
 2. liable or subject to a levy.

**levi-a-than** (lèv/àthən), n. 1. a sea monster men-  
 tioned in the Old Testament. Job 41. 2. any huge  
 marine animal, as the whale. 3. anything, esp. a ship,  
 of huge size. [ME, t. LL, t. Heb.: m. *liwydhan*, prob.  
 meaning the coiling up (snake)]

**levi-gate** (lèv/əgāt/), *v.t.* -gated, -gating. 1. to rub,  
 grind, or reduce to a fine powder, as in a mortar, with or  
 without the addition of a liquid. 2. *Chem.* to make a  
 homogeneous mixture of, as gels. [t. L: m.s. *levigatus*,  
 pp., made smooth] —*lev/ig-a/tion*, n.

**lev-in** (lèv/in), n. Archaic. lightning. [ME *leven* (e),  
 presumably repr. OE *læmne* or the like, c. Goth.  
*lauhmun* lightning]

**levi-rate** (lèv/àrit, -ràt/; lèv/à-), n. a custom, as  
 among the ancient Hebrews, requiring a man under  
 certain circumstances to marry the widow of his brother  
 or nearest kinsman. [t. L *levir* husband's brother] —  
*-ATE/* —*lev-i-ratic* (lèv/àr/ik, lèv/à-), *lev/i-rat/-*  
*-ical*, *adj.*

**Le-vis** (lèv/viz), *n.pl.* Trademark, heavy blue denim  
 trousers reinforced with copper rivets at the strain  
 points. [pl. of *Levi* (Strauss), name of manufacturer]

**Levit.**, Leviticus.

**levi-tate** (lèv/àtāt/), *v.* -tated, -tating. —*v.i.* 1. to  
 rise or float in the air by reason of lightness, or now  
 usually, through some alleged supernatural power that  
 overcomes gravity. —*v.t.* 2. to cause to rise or float in  
 the air. [f. *LEVIT* (v) + *-ATE/*; modeled on *GRAVITATE*]  
 —*lev/i-ta/tor*, n.

**levi-tation** (lèv/àtāshən), n. 1. act or phenomenon  
 of levitating. 2. (among spiritualists) the alleged  
 phenomenon of bodies heavier than air being by spiritual  
 means rendered buoyant in the atmosphere. 3. an  
 illusory object floating about in the air, esp. in dreams.

**Le-vite** (lèv/vit), n. 1. a descendant of Levi; one of the  
 tribe of Levi. 2. one of those who assisted the priests in  
 the tabernacle and temple. [ME, t. L: m.s. *levita*, *levites*,  
 t. Gk: (m.) *levitēs*, der. *Levi* Levite, t. Heb.]

**Levit-i-cal** (lèv/vit/akəl), *adj.* of or pertaining to the  
 Levites, the book of Leviticus, or the law (Levitical  
 law) contained in the book of Leviticus.

**Levit-ic** (lèv/vit/akəs), n. the third book of the Old  
 Testament, containing laws relating to the priests and  
 Levites and to the forms of Jewish ceremonial observ-  
 ance. [t. LL, t. Gk: m. *Leviticós*, der. *Levites* *Levites*]

**lev-i-ty** (lèv/vit/it), n., pl. -ties. 1. lightness of mind;  
 character, or behavior; lack of proper seriousness or  
 earnestness. 2. an instance or exhibition of this.  
 3. fickleness. 4. lightness in weight. [t. L: m.s. *levitas*]

**Lev-kas** (lèv/kās/), n. an island in the Ionian group,  
 off the W coast of Greece. 37,752 pop. (1951); 114 sq. mi.  
 Also, *Leucas*, Italian, Santa Maura.

**levo-**, *Chem.* denoting a substance which rotates the  
 plane of polarized light to the left. *Abbr.*: l-, l- [comb.  
 form repr. L *laevus* left]

**le-vo-glu-cose** (lèv/vè glō/ōkōs), n. *Chem.* the levo-  
 rotatory form of glucose.

etc. the rotation of the plane of polarization of light to  
 the left. Also, *laevorotation*.

**le-vo-ro-ta-to-ry** (lèv/vòròt/àtòr/), *adj.* *Optics*, *Chem.*  
 etc. turning the plane of polarization of light to the left,  
 as certain crystals, etc. Also, *laevorotatory*.

**lev-u-lin** (lèv/yəlin/), n. *Chem.* an amorphous sub-  
 stance from which levulose can be formed, occurring in  
 the tubers of certain species of *helianthus*, etc.

**lev-u-lin-ic acid** (lèv/yəlin/ik/), a hygroscopic acid,  
CH3COCH2CH2COOH, derived from the nucleic acid  
 of the thymus. It is industrially obtained from sugar  
 by reaction with hydrochloric acid, and used to clean  
 metals, such as milk cans, to guard against bacterial  
 infection.

**lev-u-lose** (lèv/yəloz/), n. *Chem.* fructose; fruit sugar.  
 [f. m.s. L *laevus* left + *-ULE* + *-OSE*]

**lev-y** (lèv/y), n., pl. levies, v. levied, levying. —*n.*  
 1. a raising or collecting, as of money or troops, by au-  
 thority or force. 2. that which is raised, as a tax assess-  
 ment or a body of troops. —*t.t.* 3. to make a levy of;  
 collect (taxes, contributions, etc.). 4. to impose as an  
 assessment (on). 5. to raise or enlist (troops, etc.) for  
 service. 6. to set going, start, or make (war, etc.). —*v.t.*  
 7. to make a levy. 8. *Law* to seize or attach property  
 by judicial order. [ME, t. F: m. *levée*, der. *lever* raise.  
 See **LEVER**] —*lev/-er* (lèv/àr/), n.

**lev-y en masse** (lèv/yèn mäs/; àn mäs/), a prepara-  
 tion for defense by a country threatened with invasion,  
 by organized groups of civilians: [t. F: m. *levée en masse*]

**lewd** (lōd), *adj.* 1. inclined to, characterized by, or  
 inciting to lust or lechery. 2. obscene or indecent, as  
 language, songs, etc. 3. Obs. base or vile. [ME *lewd*;  
*leuede*, OE *lêa* (e)de lay, *adj.*: orig. uncert.] —*lewd/ly*,  
*adv.* —*lewd/ness*, n.

**Lew-es** (lōz/iz), n. 1. George Henry, 1817-78, British  
 philosophical writer and critic. 2. a city in SE England,  
 in Sussex; battle, 1264, 13104 (1951).

**Lew-is** (lōz/iz), n. 1. John Llewellyn (lōzəl/yn) born  
 1880, U.S. labor leader. 2. Matthew Gregory, (*Mont*  
*Lewis*) 1775-1818, British novelist and dramatist.

3. Meriwether (mèr/vèth/ər), 1774-1809, U.S. ex-  
 plorer; leader of the Lewis and Clark expedition. 4.  
 Sinclair, 1885-1951, U.S. novelist.

**lew-is-ite** (lōz/àit/), n. a chemical warfare agent,  
C2H3AsCl3, characterized by its vesicant action. [named  
 after W. Lee Lewis, Am. chemist. See -*rite*]

**Lew-is-ton** (lōz/istən), n. a city in SW Maine, on the  
 Androscoggin river. 40,804 (1960).

**Lewis with Har-ris** (hàr/viz/), the northernmost is-  
 land of the Hebrides, in NW Scotland. 26,466 pop.  
 (1951); 825 sq. mi.

**lex** (lèks), n., pl. leges (lèz/ez), law. [L: the law]

**lex-i-cal** (lèks/səkəl), *adj.* 1. pertaining to words or to  
 a vocabulary, as that of an author or a language. 2. per-  
 taining to or of the nature of a lexicon. [f. *LEXIC* (on) +  
*-AL*]

**lexical meaning**, *Gram.* that part of the meaning  
 of a linguistic form which does not depend on its mem-  
 bership in a particular form class, esp. (of inflected  
 words) the meaning common to all the members of an  
 inflectional paradigm, e.g., the meaning common to *eat*,  
*eats*, *ate*, *eaten*, *eating*, despite their differences in form.

**lexicog.**, 1. lexicographical. 2. lexicography.

**lex-i-cog-ra-pher** (lèks/səkōg/rəfər), n. a writer or  
 compiler of a dictionary. [f. m.s. L *gk. lexicographos* (f.  
*lexikō*(n) wordbook + *-graphos* writer) + *-er*]

**lex-i-cog-ra-phy** (lèks/səkōg/rəf/), n. the writing or  
 compiling of dictionaries. —*lex-i-cog-graph-i-cal* (lèks/sə-  
 kōgráf/ik/), *lex/i-cog-graph/i-cal*, *adj.* —*lex/i-cog-*  
*graph/i-cal-ly*, *adv.*

**lex-i-con** (lèks/səkən), n. 1. a wordbook or dictionary,  
 esp. of Greek, Latin, or Hebrew. 2. the list or vocabulary  
 of words belonging to a particular subject, field, or class.  
 [? t. NL (much used in Latin titles of dictionaries), t.  
 Gk.: m. *lexikōn*, neut. of *lexikós* of or for words]

**Lex-ing-ton** (lèks/singtən), n. 1. a town in E Massa-  
 chusetts, NW of Boston: the first battle of the American  
 Revolution was fought here, April 19, 1775. 27,691  
 (1960). 2. a city in N Kentucky. 62,810 (1960).

**lex-i-cl** (lèks/lōs/), *Latin*, the law of a place.

**lex non scrip-ta** (lèks/nōn skrip/tə), *Latin*, unwrit-  
 ten law; common law.

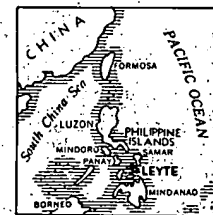
**lex scrip-ta** (lèks skrip/tə), *Latin*, written law;  
 statute law.

**lex-tal-i-o-nis** (lèks/təl/yōn/iz), *Latin*, the law of  
 retaliation.

**Ley-den** (lè/dən), n. Leiden.

**Leyden jar**, *Elect.* a de-  
 vice for storing electric  
 charge, consisting essentially  
 of a glass jar lined inside and  
 outside, for about two thirds  
 of its height, with tinfoil.  
 [named after Leyden (Lei-  
 den), city in Holland]

**Ley-te** (lè/tə; Sp. -tè), n. one  
 of the Philippine Islands, in  
 central part of group; focal  
 point of the U.S. invasion of  
 the Philippines, 1944. 1,006,  
 891 pop. (1948); 3085 sq. mi.



ðct, ðble, ðäre, ðärt; ðbb, ðqual; ðf, ðce; ðöt, ðver, ðrder, oil, böök, öze, out, öp, ðse, öрге; a = a in alone;  
 ch, chief; g, give; ng, ring; sh, shoe; th, thin; zh, that; zh, vision. See the full key on inside cover.

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# THE AMERICAN COLLEGE DICTIONARY

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